Name of Work : Drilling of New Borewells in Chikkasandra and Surrounding areas in Ward No 17 Dasarahalli Sub Division.

Detailed Estimate

Job Code No:- **Est Cost:- 80.00 Lakhs**

Sl. No	Description of Item	Unit	No	length	Width	Depth	Quantity	Rate	Amount
1	Geophysical investigation at site for sinking borewells for supplying drinking water to the habitation either through the Hand Pump MWS or P.W.S.S, by vertical electrical sounding by adopting Venner or Schlumbergers's method, including reconnaissance survey of geological formation. Geophysical investigation of existing ground water in the vicinity, its quality, quantity and acceptability of the users, indicating the location of the site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 metre in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instruments and accessories to work site, engaging technical personal and labour required etc. NOTE: 1) Additional rate on item 1&2 is allowed for drilling in over burden and fixing Casing pipes beyond 20 M (for fixing Casing pipes only) a)Above 20 M and upto 30 M - 15%, b) Above 30 M - 30% (Measurement of overburden is restricted to the depth of casing pipe fixed excluding initial depth of 20M and projection above ground level). 2) A sum of Rs. 100/- is to be deducted for Dry Borewell towards yield test (BWSSB SR 2023-24, Pg No -140, I No 12.40)								
	Abbigere-3No		3				3.00		
	Medarahalli-2No		2				2.00		
	Raghavendra Layout-1No		1				1.00		
	Mukambika layout-1No		1				1.00		
	KG Halli-1No		1				1.00		
		Nos					8.00	5288.0	**42304.00**
2	Sinking of Borewell of 165mm dia clear using super fast hydraulic rig of capacity 300 PSIG & above 1100 CMF & above in all strata including over burdern upto 20 m. Fixing of casing pipes, collars and cap with necessary cutting, threading and welding including transportation of rig and supporting vehicle, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (Excluding cost of casing pipes, collars, cap etc., complete) (BWSSB SR 2023-24, Pg No -139, I No 12.1-7)								
	0 to 50 m	Rmt	8	50.00			400.00	370.00	**148000.00**
	50 to 100 m	Rmt	8	50.00			400.00	464.00	**185600.00**
	100 to 150 m	Rmt	8	50.00			400.00	493.00	**197200.00**
	150 to 200 m	Rmt	8	50.00			400.00	572.00	**228800.00**
	200 to 250 m	Rmt	8	50.00			400.00	671.00	**268400.00**
	250 to 300 m	Rmt	8	50.00			400.00	740.00	**296000.00**
	300 to 350 m	Rmt	8	24.00			192.00	868.00	**166656.00**

3	roviding PVC ringtite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc complete for PVC pipes 200mm dia., 6 kg/sqcm & class 3 (BWSSB SR 2023-24, Pg No -140, I No 10.1.10)								
	Casing Pipe	Rmt	8	36			288.00	1155.00	**332640.00**
4	Supply of ISI mark 175mm nominal bore,plain and steel casing pipe grade of steel Fe 410 of wall thickness conforming to IS 4270-2001 and latest ammendments, electrical resistance welded steel tubes, material and conforming to IS 1387-1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5-7m both ends.threaded conforming to IS 554-1985 one end fixed with socket conforming to IS 4270-2001 and the other end with screwed pipes all shall be responsibaly free from defects. The tubes shall be responsible straight end should be with ISI marking weighing 25.10kg/m.prices include Collar-Medium duty (BWSSB SR 2023-24, Pg No -141, I No 12.32)								
		Rmt	8	30			240.00	1933.00	**463920.00**
5	Providing and fixing MS casing collars as per IS 1239 (part-II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments (BWSSB SR 2023-24, Pg No -141, I No 12.33)								
		No	8	7			56.00	150.00	**8400.00**
6	roviding and laying at site of work MS casing caps as per IS 1239 (part II) 1982 with all latest amendments if any for any dia. The thickness of plate used for covering one end shall be 3mm (minimum). The dimensions of caps and colars shall be strictly as per IS 1239 (Part-II) 1982 with all amendments including cost of material and labour charges for fixing, if any etc. complete with all lead and lifts and as directed by the Engineer in charge (BWSSB SR 2023-24, Pg No -141, I No 12.34)								
		No	8				8.00	164.00	**1312.00**
7	Providing,supplying to work site, Submersible Pump Set of 150mm dia suitable for bore well and confirming to IS 8034-2000;3Phase, SS Bowl & Impeller with Low volt Motor as per specifications,as per necessary ammendments and instructions of engineer incharge of work. Submersible Pump Sets : 15.00 HP - 120 LPM @ 253 m = 23 STG Outlet Dia - (BWSSB SR 2023-24, Pg No -153, I No 13.18.6)								
		No	8				8.00	69344.00	**554752.00**
8	Labour charges for Erection, Electrification and commissioning of Pump sets, including aligning and balancing of all items including supply and erection of two pair of upporting clamps, bore well caps, cable clips and water tight gland cable protectors, bolts, nuts, valve and gauges,tools and equipments etc., involved in the job as per specifications, with necessary tests as per specifications, with testing of as per instructions of engineer incharge of work. (BWSSB SR 2023-24, Pg No -156, I No 13.32)								
		No	8				8.00	6500.00	**52000.00**

9	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to13:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100 Volts as per IS-694:1990.3C x 6 sqmm(PWD Ele SR 2023-24 ,Pg No-7 I No -2.6.4)								
		Rmt	8	2	336.00		5376.00	245.00	1317120
10	Supply and delivery of galvanized mild steel tubes of 6mtr standard length heavy duty (C Class) as per IS 1239 (Part-I) 1990 with latest amendments with ISI Mark (one end fitted with Heavy Duty collar and other end fitted with protective cover).G.I. Pipe 50mm 'C' Class (BWSSB SR 2023-24, Pg No -156, I No 13.27)								
	Each length 6mts	Each	8	50.00			400.00	3050.00	1220000.00
11	Supply and delivery at site of brand new best make non-return valve as per IS 778/1984 with ISI Mark and as per its latest amendments 50mm (BWSSB SR 2023-24, Pg No -156, I No 13.25.1)								
		No	8				8.00	1250.00	10000.00
12	Supply and delivery at site wrought middle steel (galvanized) GI union confirming to IS 1239-II, 1991 with latest amendments if any (BWSSB SR 2023-24, Pg No -156, I No 11.12.6)For 50 mm dia								
		No	8				8.00	267.00	2136.00
13	Supply and delivery at site wrought middle steel (galvanized) GI elbow confirming to IS 1239-II, 1991 with latest amendments if any for: (BWSSB SR 2023-24, Pg No -156, I No 11.7.6) For 50 mm dia GI elbow								
		No	8	3			24.00	267.00	6408.00
14	Supply and delivery at site wrought middle steel (galvanized) GI hexagonal nipple confirming to IS 1239-II, 1991 with latest amendments if any (BWSSB SR 2023-24, Pg No -132, I No 11.14.6) For 50 mm dia GI hexagonal nipple								
		No	8				8.00	213.00	1704.00
15	Supplying and fixing 20" x 20" x 2.5" polished wood board made of not less than 15mm thick plank on both the sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., (PWD Ele SR 2023-24 ,Pg No-14 No -5.6.6)								
		No	8				8.00	326.13	2609.00
16	Supplying and fixing miniature circuit breakers on existing MCB distribution board using necessary fixing materials and 'C' type curve indicator ON/OFF energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 50-63 A SP (PWD Ele SR 2023-24 ,Pg No-13 No -5.8.6)								
		No	8				8.00	1102.00	8816.00
17	Supplying of TPST with rewirable porcelain channels in SM encloser made out of 14 SWG powder coated point of approved colour 32 amps (PWD Ele SR 2023-24 Pg No-10 No -5.5.2) 63A								
		No	8				8.00	4193.93	33551.00
18	Supplying and fixing LED type panel board indicating lamp with required colour suitable for 220 V AC 50 HZ 12/24 V DC (PWD Ele SR 2023-24 Pg No-19 No -5.38)								
		No	8				8.00	515.00	4120.00

19	Supply, installing,testing and commissioning COMMON control panel consisting of the following INCOMING:1 No set of Phase indicating lamps with SFU of suitable rating 1 No, Analog Ammeter, 1 No Analog Voltmeter 1ni with Phase selector switch, Isolating switch OUTGOING for Main Electrical Pump: 1 No. MCB 1 No. DOL of S/D Starter suitable for respective HP 1 No. Electrcal Protection Like single Phase preventor, under voltage over Volage, under current over current & dry run protection suitable for the pump described above 1 no Indoor type S-D- Star Delta Starter, 6 to 15 HP pumps (BWSSB SR 2023-24, Pg No-155 No -13.23.3)								
		No	8				8.00	15900.00	**127200.00**
20	Supplying and fixing single phase preventer using necessary wires over an existing panel board suitable for motar up to 20 HP capacities. (PWD Ele SR 2023-24 Pg No-14 No -5.3)								
		No	8				8.00	904.02	**7232.00**
21	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade multistrand copper conductor single core wire in open or concealed system of wiring as per IS 694:1990 & conforming to the attached GTP of group A. 4 sqmm (PWD Ele SR 2023-24Pg No-5 No -2.3.4)								
		Mtrs	8	15			120.00	63.00	**7560.00**
22	Supplying fixing and wiring heavy duty low voltage capacitors conforming to IS 2834 phase 400/440 volts grade, for power factor improvement of rotating machinery. (PWD Ele SR 2023-24 Pg No-19 I No -5.3.7)								
		No	8	32			256.00	480.00	**122880.00**
23	Earthing: Providing and fixing and wiring earth electrode for grounding circuits IC cutouts and other equipments on the meter board in the pit. The pits should be filled up with equal proportion of salt and charcoal 150mm around the pipe to complete depth. The connection from the pipe to the conduits etc. is to established through GI wire of sizes as per clause 7.3.3 of IS 732 using 12mm bolts, nuts, washers and check								
		No	8				8.00	3750.00	**30000.00**
24	Fabricating supplying and mounting MS box made out 14 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clA with necessary cable entry pipe with gland and box should be finished with 7tanks treatment with powder coated paint and finally finished with approved colour etc., complete. (PWD Ele SR 2023-24 Pg No-15 No -5.42.1) ie.,(Front & Back 1200X850X2=2040000mm)+(Sides 850X350X2=595000mm), (Top.Avg[{350+450}/2=400]400X1200X2=960000)=3595000mm /100=35950SQCM								
		Sqcm	8	35950			287600.00	0.50	**143800.00**
25	Providing and fixing suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps,bolts,nuts and washers etc. with necessary materials and labour tools and equipments as per instructions of engineer incharge of work. (BWSSB SR 2023-24, Pg No-157 No -13.38.3) 3½x25 Sqm								
		Mtr	8	15			120.00		
							120.00	562.00	**67440.00**
26	Providing, Laying and Fixing of GI pipes conforming to IS 1239:1990 with latest amendments complete with GI fittings (excluding the cost of fittings) with cuts and threads wherever necessary, including testing for water tightness, with all lead and commissioning. (contractor will make his own arrangements for procuring water for testing) (BWSSB SR 2023-24, Pg No-127 No -11.1.6)For Light Duty GI pipe of 50mm dia								
			8	12			96.00	442.00	**42432.00**

27	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. 63 amps(PWD Ele SR 2019-20,P-10,It-5.7.3)								
		No	8				8.00	372.00	**2976.00**
28	Earth work excavation for pipeline trenches in all kinds of soils by mechanical means as per drawing and technical specifications, including setting out, construction of shoring, strutting, barricading, caution lights, bracing, using sight rails & bonding rods at every 100 mm wherever necessary as directed, removal of stumps and other deleterious matter, dressing of sides and levelling the bottom of trench to the extent required , utilising the available excavated earth locally for the work etc., and all other appurtenances complete in the following strata. (PWD SR 2023-24-22, , Vol-1, P10 , I No-1.17.1) All kinds of soils. Depth upto 1.50 m								
	Additional pipe line		8	25.0	0.45	0.60	54.00		
			1	710.0	0.60	0.60	255.60		
		Mtr					309.60	288.20	**89227.00**
	Basic Rate	262.00							
	Add AW 10%	26.20							
	TOTAl	**288.20**							
29	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work (PWD SR 2023-24-22, P123 , It-13.33.6)50 mm nominal dia Pipes								
		Mtr	8	25.00			200.00		
							200.00	721.00	**144200.00**
30	Providing PVC ringtite pipes conforming to IS 4985:2000 with latest amendments and conveying to worksite, rolling and lowering into trenches, laying true to line and level and perfect linking at joints, testing and commissioning, including loading unloading at both destinations and cuts of pipes wherever necessary including jointing of PVC pipes and specials (excluding cost of specials) with jointing of approved type, with all labour with all lead & lift including encasing the pipe alround to a depth of not less than 15 cms. with soft gravel or selected earth available from the excavation etc. complete and giving necessary hydraulic test to the required pressure as per ISS (Contractor will make his own arrangements for procuring water for testing) etc. complete for PVC pipes 63mm dia., 6 kg/sqcm & class 3 m (pg no113,it no-10.1.4 PWSSR 2023-2024)								
	4		1	710.0			710.00		
							710.00	161.00	**114310.00**
31	Providing and laying in position Cement Concrete for all Sub structures of building, Irrigation works, Sub structure works of bridges, Drain works & other parallel works from 0.50m to 3.50 m height. The granite/trap/basalt crushed graded coarse aggregates and fine aggregates as per relevant IS Codes machine mixed with super plasticisers, laid in layers, well compacted using needle vibrators, providing weep holes wherever necessary, including all lead & lifts, cost of all materials of quality, confirming to the requirements of relevant IS codes, labour, Usage charges of machinery, curing and all other appurtenances required to complete the work as per technical specifications M 20 design mix 20 mm nominal size graded crushed coarse aggregates PWD SR 2023-24 Pg No-16 Item No- 2.4.2								
			8	25.0	0.45	0.15	13.50		
							13.50	6955.30	**93897.00**
	Basic Rate	6323.00							
	AW 10%	632.30							
	Total	**6955.30**							

32	Providing and fixing Brass full way valve gate with C.I. wheel of approved quality (screwed end) 50 mm nominal bore (PWD SR 2023-24, Vol-2 Pg No-117 No -13.4.5)							
	For Main Line	Each	8				8.00	855.00	6840.00
33	Refilling available earth around trenches/pipelines, cables in layers not exceeding 20 cms in depth, compacting each deposited layer by ramming after watering with a lead upto 50 m, and lift upto 1.5 m. Including cost of all labour complete as per specifications (PWD SR 2023-24-22, Vol-1PNo 7 , I No-1.10)							
	Additional pipe line	cum	8	25.00	0.45	0.45	40.50		
			1	710.0	0.60	0.60	255.60		
							296.10		
	deduct shrinkage @ 30%						-88.83		
							207.27	176.00	36479.52
	Basic Rate	160.00							
	Add AW 10%	16.00							
	TOTAl	**176.00**							

4	BESCOM deposit Charges	8	1			8.00	23700.00	189600.00
							Sub Total :-	6778521.52
							Add 18% GST :-	1220133.87
							Miscellaneous:-	1344.61
							Grand TOTAL Rs :-	8000000.00

CERTIFICATE;-

1.The site has been inspected and the work is found to be necessary.

2.The estimate is based on KPWD SR 2023-24, BWSSB SR 2023-24 & PWD Ele SR 2023-24

3.The provisions were made in this estimate are necessary and adequate.

4.The area comes under the Bruhat Bengaluru Mahanagara Palike Limits.

Assistant Engineer
Ward No 17

Asst Exe Engineer
Dasarahalli Sub Division

K. M. [illegible]
Executive Engineer
Dasarahalli Division

ADMINISTRATIVELY SANCTIONED FOR
(Rupees 80,00000/- (Eighty Lakhs only).
Under the Head of Account P-1802
Registered as no EE(D.D.)/AS 23 Subject to conditions contained in Enclosed Memo No BBMP/EE/DD/AS/23/2024-25 Dt: 12/09/24
JE/AE. (DASARAHALLI, BBMP)

Technically Sanctione for Rs. 80.00 lakhs
Rs. In words Rs. Eighty Lakhs only
Under P-1802 (2023-24)
Job Code No.
Registered as CE No. 11/2024-25 Subject to conditions contained in Enclosed Memo No. CE/D2/TS/11/2024-25 Dt: 31/09/24
AE/JE. TA CE(D)